

User's manual



NVC-DN6227SD-II

NVC-DN6237SD-II

NOVUS®

INFORMATION

EMC (2004/108/EC) and LVD (2006/95/EC) Directives



CE Marking

Our products are manufactured to comply with requirements of following directives and national regulations implementing the directives:

- Electromagnetic compatibility EMC 2004/108/EC.
- Low voltage LVD 2006/95/EC with further amendment. The Directive applies to electrical equipment designed for use with a voltage rating of between 50VAC and 1000VAC as well as 75VDC and 1500VDC.

WEEE Directive 2002/96/EC



Information for users who want to get rid of electrical and electronic appliances

This product is marked according to the European Directive on Waste Electrical and Electronic Equipment (2002/96/EC) and further amendments. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. It shall be handed over to the applicable collection point for the waste electrical and electronic equipment for recycling purpose. For more information about recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

RoHS Directive 2002/95/EC



Information concerning limitation of the use of dangerous substances in the electrical and electronic appliances.

Out of concern for human health protection and friendly environment, we assure that our products falling under RoHS Directive regulations, regarding the restriction of the use of hazardous substances in electrical and electronic equipment, have been designed and manufactured in compliance with the above mentioned regulation. Simultaneously, we claim that our products have been tested and do not contain hazardous substances whose exceeding limits could have negative impact on human health or natural environment.

Information

The device, as a part of professional CCTV system used for surveillance and control, is not designed for self installation in households by individuals without technical knowledge.

The manufacturer is not responsible for defects and damages resulted from improper or inconsistent with user's manual installation of the device in the system.

IMPORTANT SAFEGUARDS AND WARNINGS

ATTENTION!

PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT PROVISIONED FOR THE GIVEN PRODUCT IN ITS USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR THAT ARISES FROM THE NORMAL APPLICATION OF THE PRODUCT, ITS MANUFACTURER MUST BE CONTACTED OR THE RESPONSIBILITY OF THE MANUFACTURER FOR THE RESULTS OF SUCH AN ACTION SHALL BE EXCLUDED.

IMPORTANT SAFEGUARDS AND WARNINGS

1. Prior to undertaking any action with the device, please consult following manual, and read all the safety and operating instructions before operating the device.
2. Please keep the following manual for the time of device's lifespan in case when referring to the contents of the manual would become necessary.
3. Follow all the safety precautions described in this manual. Improper installation and camera operation may have impact on operator safety as well as camera operational reliability and lifespan.
4. Camera mounting and operations should be conducted according to this manual, both for users and service personnel.
5. Please unplug the unit from the power before starting maintenance procedures.
6. Please use only attachments / accessories specified by the manufacturer.
7. Do not install the camera near any steam sources or near water (any wet area like pools, bath tubs etc.).
8. Mounting the device in places where proper ventilation cannot be provided (e. g. closed lockers etc.) is not recommended since it may lead to heat build-up and damaging the device itself in consequence.
9. Mounting the camera on unstable surface or using not recommended mounts is forbidden. Improperly mounted camera may be the cause of fatal accident or be seriously damaged itself. Camera must be mounted by qualified personnel with proper authorization, in accordance to user's manual.
10. Device should be supplied only from power sources which parameters are in accordance to one's pointed out by the producer in camera technical datasheet. Therefore it is forbidden to supply the camera from power sources with their parameters unknown, unstable or not meeting the producer's requirements.
11. Signal cables (conducting TV or/and telemetric signal) should be placed in a way excluding the possibility of damaging them by accident. Special attention must be paid to cables going out of the camera and connecting power supply;

IMPORTANT SAFEGUARDS AND WARNINGS

- eng
12. To avoid equipment damage, whole TV circuit should be equipped with properly made (in accordance with Polish Regulations) discharge-, overload- and lightning protection devices. Usage of separating transformers is advised.
 13. Electric installation supplying the device should be designed to meet the specifications given by the producer in such a way, that overloading it is impossible.
 14. Camera should be protected from water and objects that may get inside it.
 15. User cannot repair or upgrade equipment himself. All maintenance actions and repairs should be done only by the qualified service personnel.
 16. Unplug the camera from the power source immediately and contact the proper maintenance department when the following occurs:
 - Damages to the power cord or to the plug itself;
 - Liquids getting inside the device or exposure to strong mechanical shock;
 - Device behaves in a way not described in the manual and all adjustments approved by the manufacturer, and possible to apply by user himself, seem not to have any effect;
 - Camera is damaged;
 - Atypical behaviour of the camera components may be seen (heard).
 17. In case of repairs please pay attention to using only original replacement parts (with their parameters in accordance to those specified by the producer) should be paid. Non-licensed service and non-genuine replacement parts may cause fire or electrocution;
 18. After maintenance procedures please conduct device tests and make sure that all the camera components are operating correctly.
 19. Device should be supplied only from a power sources whose parameters are in accordance with those specified by the producer in the camera technical datasheet. Therefore, it is forbidden to supply the camera from a power sources with unknown parameters, unstable or not meeting producer's requirements;

INFORMATION

Due to the product being constantly enhanced and optimized, certain parameters and functions described in the manual in question may change without further notice. We strongly suggest visiting the www.novuscctv.com website in order to access the newest manual

Data included in the following user's manual is up to date at the time of printing. AAT Holding Sp z o.o. holds exclusive rights to modify this manual. The producer reserves the rights for device specification modification and change in the design without prior notice.

TABLE OF CONTENT

TABLE OF CONTENT	5
1. FOREWORD INFORMATION	6
1.1. General characteristic	6
1.2. NVC-DN62x7SD-II tech specification	7
1.3. Camera dimensions	9
1.4. Package contents	10
2. START-UP AND INITIAL NVC-DN62X7SD CONFIGURATION	11
2.1. Description of crucial electrical connectors	11
2.2. Connecting MAIN cable	11
2.3. Camera DIP switch settings	13
2.4. Description of alarm connector inputs/outputs	15
3. MOUNTING THE CAMERA	16
4. CONTROLLING THE CAMERA	18
4.1. Controlling the camera via N-Control	18
4.2. Controlling the camera via PELCO-D / PELCO-P protocols	21
5. CAMERA OSD MENU	23
5.1. System information	24
5.2. Display setup	24
5.3 Clock	25
5.4. Dome camera setup	26
5.4.1. Camera setup	26
5.4.2. Motion setup	29
5.4.3. Preset setup	30
5.4.4. Scan setup	30
5.4.5. Pattern setup	31
5.4.6. Tour setup	32
5.4.7. Schedule	33
5.5. Password setup	34
5.6. System initialize	34

eng

FOREWORD INFORMATION

1. FOREWORD INFORMATION

1.1. General characteristic

- Day/Night PTZ cameras
- Mechanical IR cut filter
- IR operation capability
- Horizontal resolution: up to 680 TVL
- Min. illumination: from 0.02 lx/F=1.6
- Motor-zoom lens, AI and AF function
- Digital Slow Shutter (DSS)
- DIS - digital image stabilization
- 8 tours (40 actions per tour)
- 10 auto-scans
- 8 patterns
- 255 presets
- Independent exposure settings for each preset
- 8 privacy zones
- 27x (NVC-DN6227SD-II) or 37x (NVC-DN6237SD-II) optical zoom
- 3 alarm inputs and 1 relay output (NO/NC)
- Home function
- Schedule function
- Auto-flip - automatic 180° camera rotation after reaching tilt limit.
- Global function
- Password protected menu
- OSD camera menu, controllable via:
 - NV-KBD70, NV-KBD50 keyboards,
 - directly via front panels of certain NOVUS® DVRs
- Features pan, tilt and zoom control via NV-KBD70, NV-KBD50 keyboards and directly via front panels of certain NOVUS® DVRs
- RS-485 control
- N-Control, Pelco-P, Pelco-D remote control protocols
- JP-67

eng

FOREWORD INFORMATION

- Installation options:
 - wall mount via bracket (included)
 - ceiling mount via additional adapter NVB-SD6CB-II
 - corner mount via additional adapter NVB-SD6CA
 - pole mount via additional adapter NVB-SD6PA
- Bubble and wall bracket included
- 12 VDC / 24 VAC power supply

1.2. NVC-DN62X7SD-II tech specification

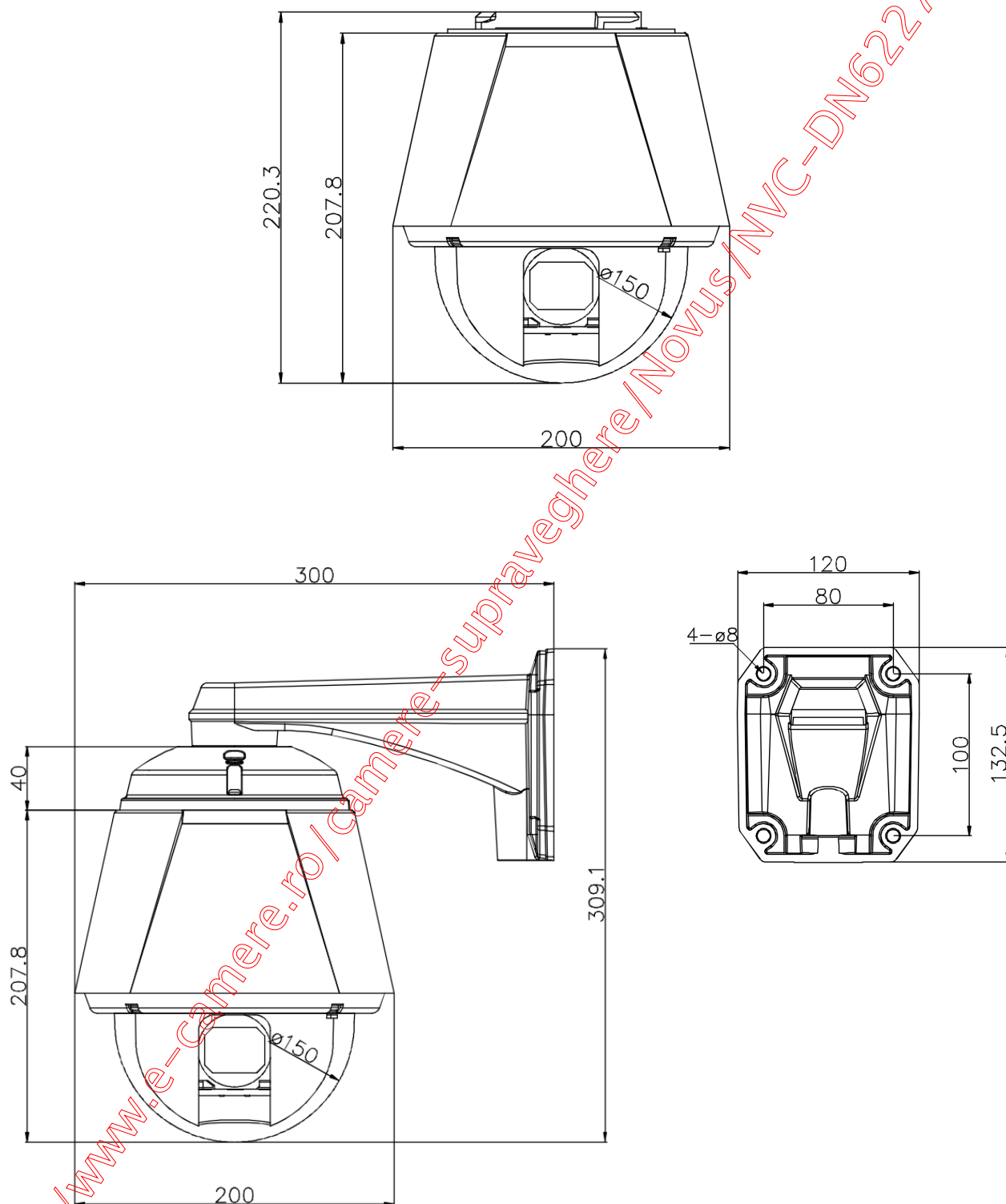
Model	NVC-DN6237SD -II	NVC-DN6227SD -II
Pick-up Element	1/4" Sony Super HAD CCD	
Horizontal Resolution	560 TLV - color mode, 680 TLV - B/W mode	
Sensitivity	0.2 lx/F=1.6 - Color, 0.02 lx/F=1.6 - B/W	
S/N ratio	> 52 dB (AGC off)	
Electronic shutter	Automatic: 1/50 s ~ 1/120 000 s, Manual	
Digital Slow Shutter (DSS)	Up to x512	
Auto Gain Control (AGC)	Low, Medium, High, Manual, Off	
White balance	Auto / Manual (RGB adjustment)	
Back Light Compensation (BLC)	Low, High, Off	
High Light Compensation (HLC)	Low, High	
Digital Noise reduction (DNR)	Low, Medium, High, Off	
Synchronization	Internal	
Day/night switching	Automatic / Manual	
Lens type	Motor-Zoom AF/ AI lens, f=3.5 ~ 129.5mm (F1.6 ~ F3.9),	Motor-zoom AF/ AI lens, f=3.5 ~ 95 mm (F1.6 ~ 2.8)
Angle of view (H)	55.5° ~ 1.59°	55.5° ~ 2.24°
Zoom	37 x Optical, 16x Digital	27 x Optical, 16x Digital
Video output	BNC, 1.0 Vp-p, 75 Ohm	
Alarm input	3 (NO/NC) galvanically separated	
Alarm output	1 relay, DC24V 1A / AC125V 0,5AC	

FOREWORD INFORMATION

Model	NVC-DN6237SD-II / NVC-DN6227SD-II
Remote control	RS-485
Protocol	N-Control, Pelco-P, Pelco-D
Camera OSD	On Screen Display (OSD)
User Authorization	Password protected camera menu access
Presets	255
Tours	8 (40 actions per tour)
Auto-scans	10
Patterns	8 (760 commands, approx. 5 min. per pattern)
Privacy zones	8
Tilt	0° ~ 90°
Pan	360° (continuous rotation)
Tilt/pan speed	Up to 500°/sek
Additional functions	Auto-flip - automatic 180° rotation, Home function, DIS - Digital Image Stabilization, Image flip, Preset freeze, Global preset function Multi-lingual OSD
Enclosure	Aluminium, Polycarbonate, ABS
Degree of protection	IP 67
Fan/heater	Yes/Yes
Power supply	12 VDC, 24 VAC
Power consumption	18 W (12 VDC heater on) 38 W (24 VAC heater on)
Operating temperature	-30°C ~ 50°C
Dimensions (mm)	Camera Ø 200mm 208 (H) Camera with wall bracket 300 (W) × 310 (H) mm
Weight	4.3 Kg camera with wall bracket

FOREWORD INFORMATION

1.3. Camera dimensions



eng

FOREWORD INFORMATION

1.4. Package contents

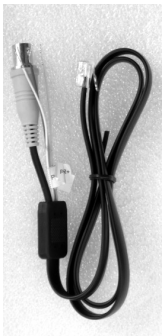
Please make sure that the package contains the following items:



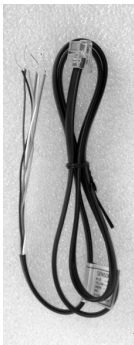
Speed dome camera: 1 pc.
Dome with O-ring: 1 pc.
Wall bracket: 1 pc.



Mounting screws: 4 pcs
Allen key: 1 pc.



Main connector



Alarm connector



Wall bracket rubber seal



User's manual

If the equipment has been damaged during transport or is incomplete, the contents of package should be packed back to the original box. Contact the local NOVUS distributor for further assistance.

CAUTION!

If the device was brought from a location with lower temperature, please wait until it reaches the temperature of location it is currently in. Turning the device on immediately after bringing it from a location with lower ambient temperature is forbidden, as the condensing water vapour may cause short-circuits and damage the device as a result.

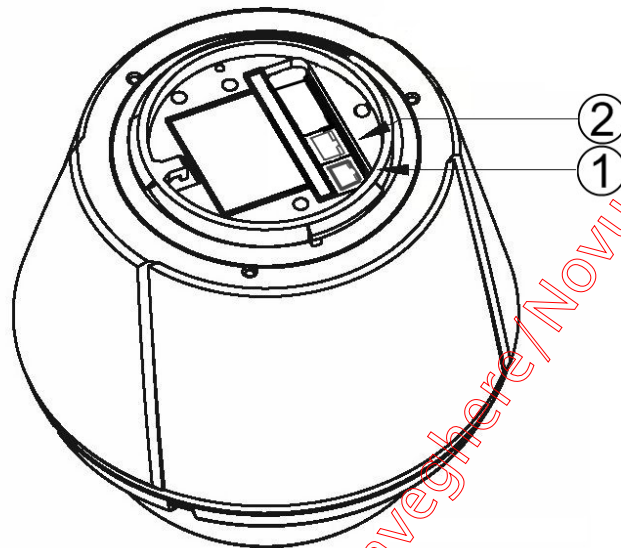
Before starting the device please familiarize yourself with the description and the role of particular inputs, outputs and adjusting elements that the device is equipped with.

START-UP AND INITIAL CAMERA CONFIGURATION

2. START-UP AND INITIAL NVC-DN62x7SD-II CONFIGURATION

2.1. Description of crucial electrical connectors

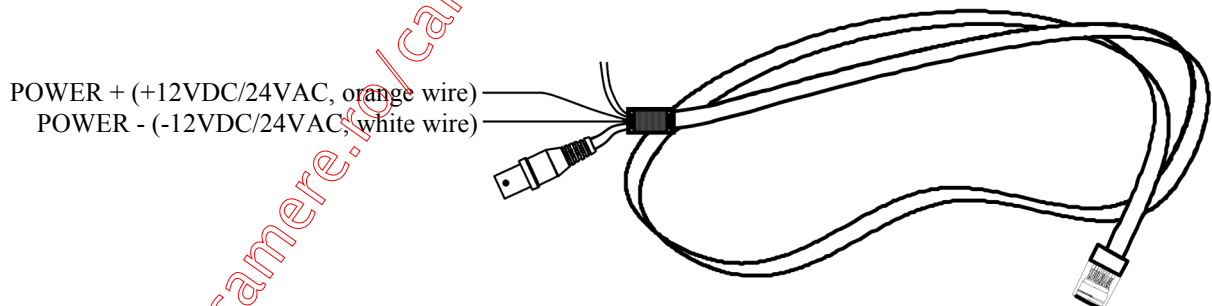
NVC-DN62x7SD-II Camera



1. I/O - Alarm input/output terminal block
2. MAIN - Main connector (12 VDC/24VAC power supply, RS485, BNC monitor output)

2.2. Connecting MAIN cable

Power supply should be connected to MAIN cable, as depicted below :



Cable allows to create basic electrical connections for power supply and remote controlling of the camera.

ATTENTION!

The camera is 12 VDC/24VAC supplied. Minimal required power output for the power supply unit should be at least 38W. In case of using 12 VDC power supply please pay attention to wire polarisation!

As while it is not important when using AC power supply, it is recommended to connect the same phase to respective power supply terminals in devices.

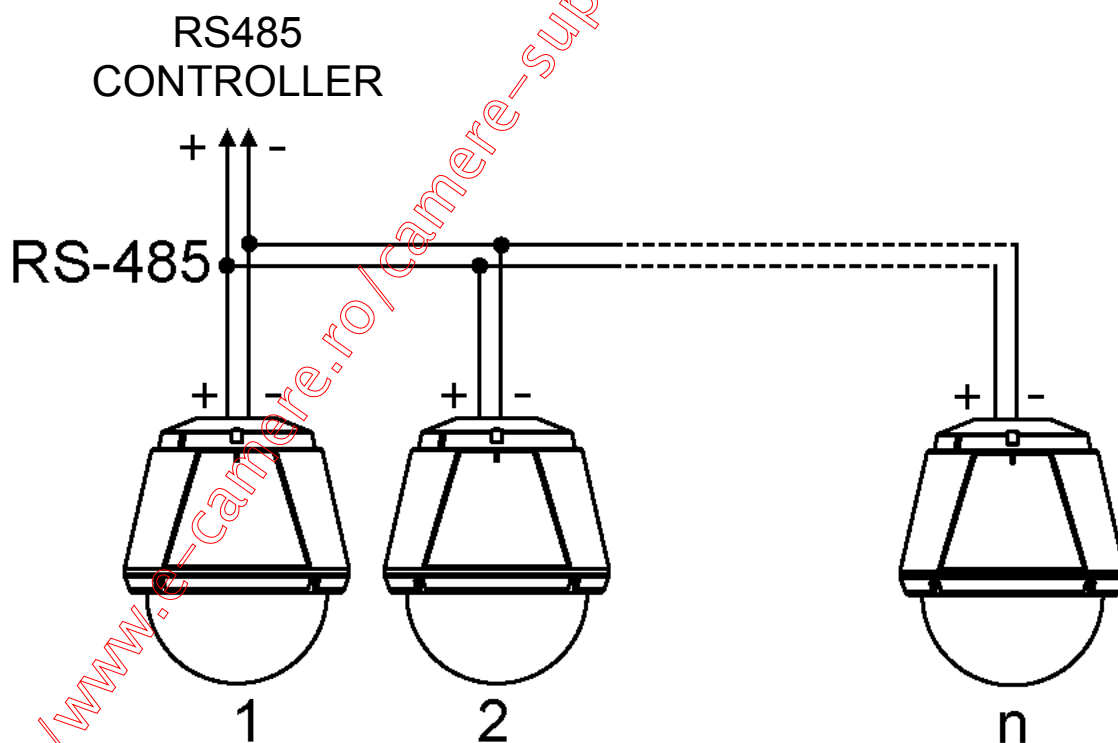
START-UP AND INITIAL CAMERA CONFIGURATION

Table below describes wiring for the MAIN cable:

MAIN RJ45 connector pin	Wire color	Description
1,2	BNC connector	Video out -(BNC, 1.0 Vp-p, 75 Ohm)
3	Yellow	RS485 -
5	Red	RS485 +
7	Orange	POWER + (12VDC, 24VAC)
8	White	POWER - (12VDC, 24VAC)

For camera and controller communication, RS-485 (selected by micro switches setting) link is used. CAT5 unshielded twisted pair cable is recommended for telemetry data transmission. Only one wire pair of CAT5 0.35 mm² cable is used for controlling the camera and maximum allowed distance for RS-485 communication between camera and keyboard is 1.200 m.

For **RS-485** connections, **RS485+** and **RS485-** wires should be used. They should be connected to respective **TX+** and **TX-** connectors of the controller e.g. NV-KBD70 keyboard. Next camera in the cascade is connected also using same **RS485+** and **RS485-** connectors.

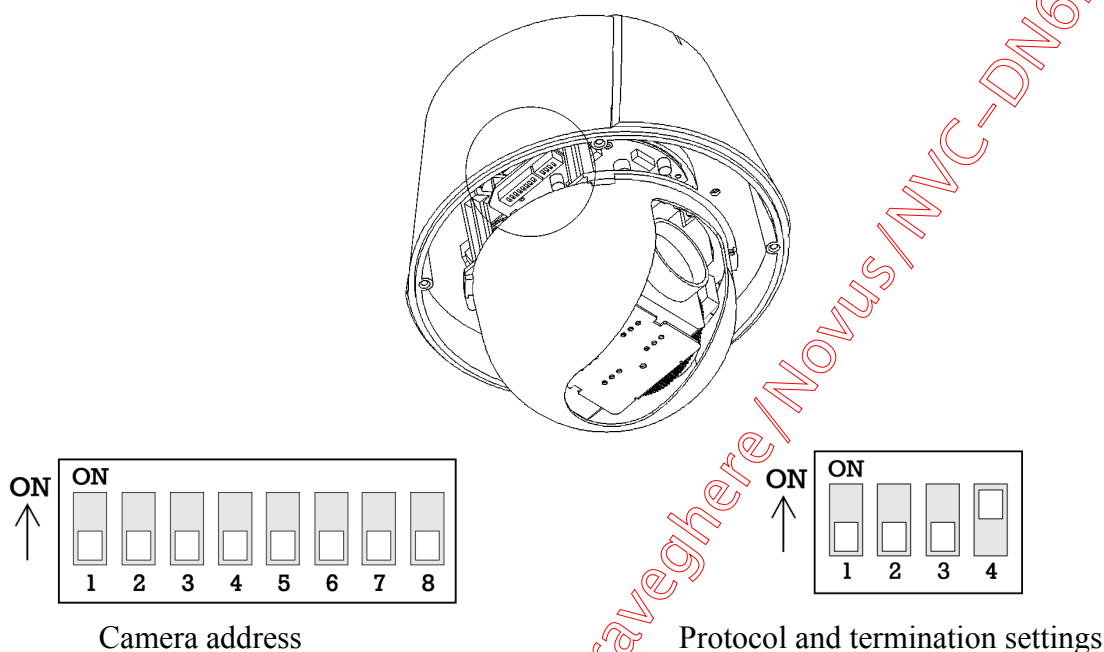


When connecting telemetry cables into a star a serial data distributor should be used, e.g. NOVUS NVRS-016DD.

START-UP AND INITIAL CAMERA CONFIGURATION

2.3. Camera DIP switch settings

Camera features DIP-switch blocks for configuring addresses and transmission parameters for RS-485 protocol. Switch positioning is presented on the picture below:



- Addressing the camera

In order to avoid control conflicts, each camera should be assigned with unique address in the system. Switches numbered 1 to 8 are responsible for assigning an address.

When building a system containing a single DVR, assign addresses in accordance with their respective video inputs numbering.

Number visible on the DIP switch and their values are described in table below. Sum of the values determines the physical ID address of the camera.

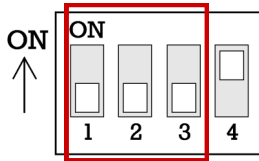
Switch no:	1	2	3	4	5	6	7	8
Value:	1	2	4	8	16	32	64	128
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
M	ON	ON	OFF	ON	OFF	OFF	OFF	OFF

ATTENTION!

Each camera has its address set to 1 by default!

START-UP AND INITIAL CAMERA CONFIGURATION

- Selecting protocol parameters



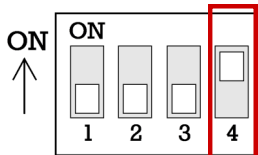
Switches from 1 to 3 select protocol and transmission speed. Please pay attention to setting identical transmission parameters for controllers (keyboard, DVR, PC). Table below depicts available switch configurations:

Protocol and transmission speed	Switch no		
	1	2	3
PELCO-D, 2400 bps	OFF	OFF	OFF
PELCO-D, 9600 bps	ON	OFF	OFF
PELCO-P, 4800 bps	OFF	ON	OFF
PELCO-P, 9600 bps	ON	ON	OFF
N-CONTROL, 9600 bps	OFF	OFF	ON

ATTENTION!

Camera has Pelco-D with 2400 bps speed set by default!

- Bus termination settings



The device which is connected at the end of the line, whether a camera or a keyboard controller, must have its DIP switch set as explained below. Without proper termination, control signal errors may occur. Total length of the cable for communication should not exceed 1.200 m. (CAT5 twisted pair cable).

Termination	Switch no. 4
DISABLED	OFF
ENABLED	ON

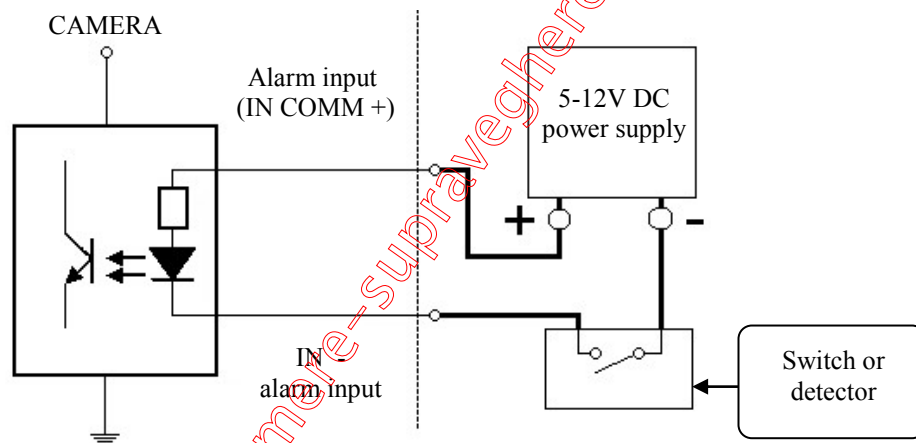
START-UP AND INITIAL CAMERA CONFIGURATION

2.4. Description of alarm connector inputs/outputs

Table below contains description of alarm inputs/outputs

I/O RJ45 pin	Wire color	Description
1	Blue	IN COM + common alarm input (+)
2	Yellow	IN 1 - alarm input 1
3	Green	IN 2 - alarm input 2
4	Red	IN 3 - alarm input 3
5	Black	RELAY - relay output
6	White	RELAY - relay output

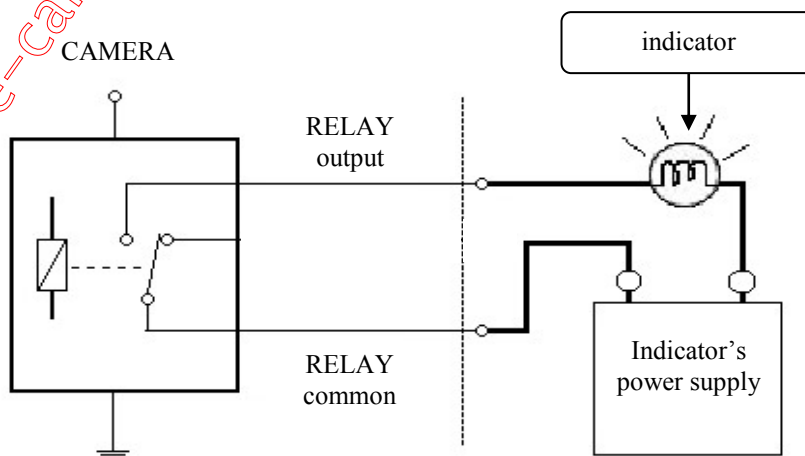
- Typical alarm input connection



ATTENTION!

Please pay special attention for maintaining polarity and voltage. IN COMM + is a common connector for all inputs and should be therefore connected to the + of power supply. Improper connection may result in camera damage.

- Typical relay output connection.



MOUNTING THE CAMERA

3. MOUNTING THE CAMERA

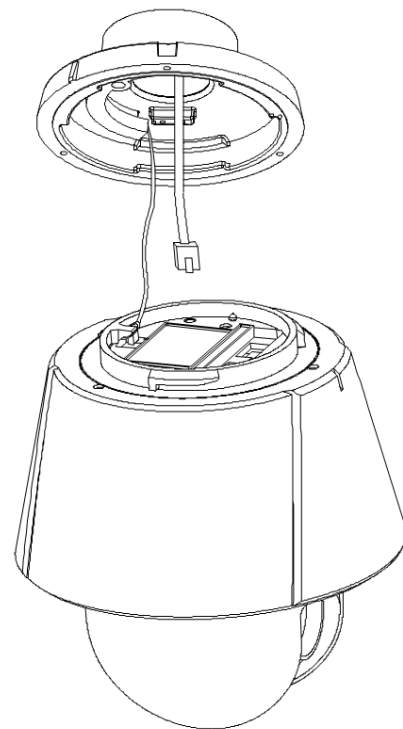
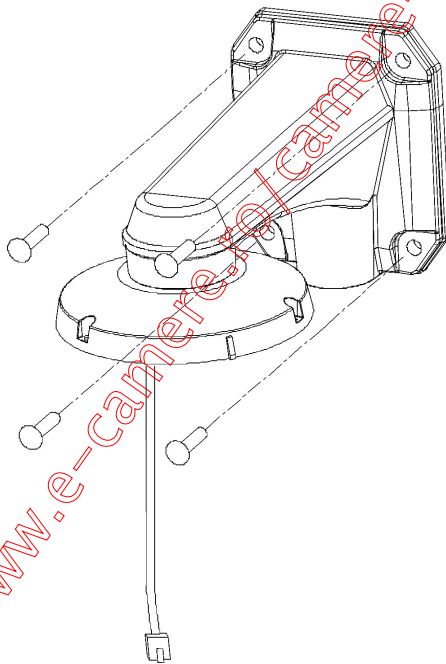
In order to obtain declared watertightness camera should be mounted on flat, smooth surfaces. When mounting the camera on uneven/rough surfaces please seal the mounting place additionally with appropriate sealing mass, paying special attention to mounting holes.

Caution!

Due to safety reasons, maximum load capacity of surface shouldn't be less than 25kg.

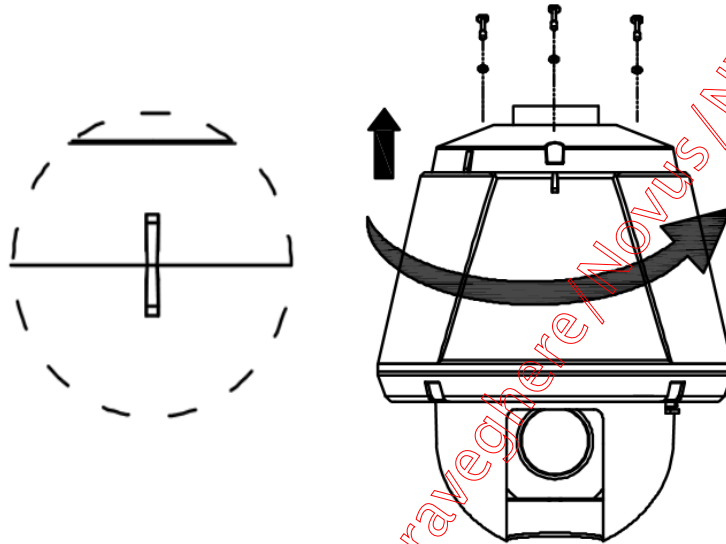
In order to successfully mount a camera, please follow the procedure below:

- Put the bracket to the wall in a desired mounting place (with cable hole). Taking the bracket's base screw holes as a pattern, mark future drilling holes for screws using a punch.
- Drill 4 holes in accordance with previously done markings and base hole placement (when mounting the camera to concrete surfaces please purchase appropriate mounting accessories)
- Put required cables through the seal and bracket's arm.
- Mount the bracket with seal, paying special attention to all mounting holes and additionally sealing them with appropriate sealing mass if necessary.
- Using safety cable, attach the dome to the bracket.



MOUNTING THE CAMERA

- Connect required signal and power supply cables.
- Put the excess cable back into the bracket.
- Put the dome onto the bracket so the vertical markings on the dome and bracket's surface are aligned and turn right until resistance is felt.



eng

- Screw the camera to the bracket using three Torx screws (key included). Please make sure that the casing fits the bracket after screwing, otherwise the rubber gasket won't fill its purpose and water may get inside the camera.
- Remove the lens plug from the camera module.
- Attach camera bubble to the casing paying special attention to rubber gasket. Please make sure that the gasket fits the gap between bubble and casing, otherwise water may get inside the camera.

CAUTION!

The supply voltage should be turned on when camera unit is completely installed. Otherwise, enter camera's menu and reboot it after finishing installation.

CONTROLLING THE CAMERA

4. CONTROLLING THE CAMERA

N-Control is the recommended control protocol for the Novus NVC-DN62x7SD-II series cameras and allows to fully exploit their abilities. Cameras may be also PELCO-D/PELCO-P controlled, however methods of programming and control differ.

To establish proper connection between camera and keyboard following conditions must be met:

- an unique camera address for the whole system
- the same baud rate (speed setting) in the camera and in the keyboard (2400/4800/9600)

Details regarding camera control settings are described in proper manual of the keyboard.

4.1. Controlling the camera via the N-Control

In order to start camera control please enter its number via numpad and confirm with  (for NV-KBD50 keyboard) or  (for NV-KBD70) key.

When controlling the camera via NV-KBD70 keyboard, function and numerical keys as well as joystick are used.

Controlling camera via the NV-KBD50 utilizes function, numpad buttons as well as joystick.

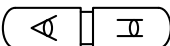
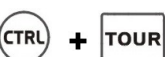
To open camera menu please press and hold for 3 sec.  button (for NV-KBD50) or press button  (for NV-KBD70).

Navigation through camera's OSD menu:

Action	Function
Joystick up or down	Navigation through menu Changing parameter values Editing field value
Joystick left or right	Navigation through text fields Navigation through settings fields
IRIS CLOSE FOCUS NEAR	Execution of a command Value edition
IRIS OPEN FOCUS FAR	Cancelling a command Return to a higher-level menu

CONTROLLING THE CAMERA

Functions of particular buttons for NV-KBD50 and NVKBD70 are presented below:

Manual description	NV-KDB70	NV-KBD50	Function
IRIS OPEN			iris control - opening, password entering, start of programming
IRIS CLOSE			iris control - closing, end of programming
FOCUS FAR			focus control - far
FOCUS NEAR			focus control - near
PRESET MOVE			preset calling
GLOBAL PRESET MOVE			preset calling for all connected cameras
PRESET SET		 (3s)	preset saving
SCAN			auto-scan
SCAN SET		 (3s)	auto-scan programming
TOUR			tour function
TOUR SET		 (3s)	tour programming
PATTERN			pattern function
PATTERN SET		 (3s)	pattern programming
MENU		 (3s)	opens OSD menu, confirms selection
ESC			exits menu
ON			enables additional functions
OFF			disables additional functions
HOME			returns camera to home position

In order to call a surveillance function, please select its number from the numpad and confirm it by pressing appropriate function button (e.g. [TOUR])

CONTROLLING THE CAMERA

Additional functions are enabled/disabled via ON / OFF buttons

NV-KBD70 Keyboard	NV-KBD40 Keyboard	Function
		Turning on additional functions. List of additional functions is described below. To turn on a demanded function, select its number using numerical keys and press  or 
		Turning off additional functions. List of additional functions is described below. To turn off an additional function, select its number using numerical keys and press  or 

Additional functions are presented in the table below:

Function number	Function
1	Enables/disables relay 1
7	Selects Auto / Manual focus mode
8	Selects Auto / Manual AE mode
9	Changes night shot to auto
10	Turns on / turn off infrared filter
11	Turns on / turn off back light compensation
12	Turns digital zoom on / off
13	Turn camera status information on / off
104	Turn wide dynamic range on / off
105	Turn picture stabilization on / off

CONTROLLING THE CAMERA

4.2. Controlling the camera via PELCO-D / PELCO-P protocols

Controlling the camera via PELCO-D/PELCO-P protocols is also possible, however methods of programming differ. Furthermore PELCO doesn't support all camera functions in contrast to N-CONTROL.

In order to control camera please enter its number from numpad and confirm it by pressing the  key (for NV-KBD50) or  for NV-KBD70 keyboard.

In case of NV-KBD70, camera functions are controlled via buttons located at the bottom part of keyboard, numpad, joystick, and some of the buttons located to the right of the SHUTTLE knob.

Controlling camera from NV-KBD50 is performed via function buttons, numpad and joystick.

In order to open camera menu please press and hold for 3 sec  (NV-KBD40) or  (NV-KBD70).

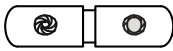
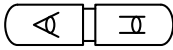
Action	Function
Joystick up or down	Navigation through menu Changing parameter values Editing field value
Joystick left or right	Navigation through text fields Navigation through settings fields
IRIS CLOSE FOCUS NEAR	Execution of a command Value edition
IRIS OPEN FOCUS FAR	Cancelling a command Return to a higher-level menu

INFORMATION:

Opening the camera MENU may be also performed via calling preset 95 by pressing **95** and **PRESET MOVE** or **PRESET SET**.

CONTROLLING THE CAMERA

Functions for the NOVUS NV-KBD50 and NVKBD70 are presented in the table below:

Oznaczenie w instrukcji	Klawiatura NV-KDB70	Klawiatura NV-KBD50	Funkcja
IRIS OPEN			iris control - opening
IRIS CLOSE			iris control - closing
FOCUS FAR			focus control - far
FOCUS NEAR			focus control - near
PRESET MOVE			preset calling
PRESET SET		 (3s)	preset saving
SCAN	 11 - 18  141 - 148	 11 - 18  141 - 148	auto scan function
TOUR	 21 - 28  51 - 158	 21 - 28  151 - 158	tour function
PATTERN	 1 - 4  131 - 134	 1 - 4  131 - 134	pattern function
MENU		 (3s)	entering camera menu

To call an observation function (pattern, preset) please select its function number first (using numpad), then confirm it by function call button (e.g. [PRST]). To start AUTOSCAN or TOUR function please select its function number from the given range and acknowledge preset calling key.

Additional functions are presented in the table below:

Nr.	Type	Funkcja
161	PRESET MOVE/SET	Enables/disables relay 1
167	PRESET MOVE/SET	Enables/disables zoom proportional function
170	PRESET MOVE	Turn wide dynamic range off
171	PRESET MOVE	Turn wide dynamic range on
174	PRESET MOVE	Changes focus mode to auto
175	PRESET MOVE	Changes focus mode to manual
176	PRESET MOVE	Changes focus mode to semiauto
177	PRESET MOVE	Changes night shot to auto mode
178	PRESET MOVE	Changes night shot to night mode
179	PRESET MOVE	Changes night shot to day mode

CAMERA OSD MENU

5. CAMERA OSD MENU

Before programming or operating the PTZ camera, you have to select a desired camera number (via keyboard or another remote controller).

Accessing the camera's menu depends on the controller type and the protocol used. All the details regarding camera communication parameters are described in the instruction manuals of the NV-KBD50/70 keyboards (or other controllers).

ATTENTION!

The procedure of camera programming refers to keys of the NV-KBD70 keyboard and N-Control telemetry protocol.

When using a different controller or protocol select control buttons appropriate for given function.

Menu is accessible after pressing the *MENU* button, *ESC* closes the menu. When additional functions (such as tour or auto-scan) are programmed or when camera is in alarm mode, menu is accessible only after abandoning current mode (e.g. by forcing the tilt or pan movement or by confirming alarm).

Main menu is depicted below:

```

SPEED DOME CAMERA
SYSTEM INFORMATION
DISPLAY SETUP
CLOCK
DOME CAMERA SETUP
PASSWORD SETUP
SYSTEM INITIALIZE
EXIT

```

eng

CAMERA OSD MENU

5.1. SYSTEM INFORMATION

Menu overview:

SYSTEM INFORMATION	
FIRMWARE VER.	: 1.3W
COLOR SYSTEM	: PAL
PROTOCOL	: N-CONT
ADDRESS	: 2
BAUD RATE	: 9600
BACK	
EXIT	

SYSTEM INFORMATION menu displays basic information about camera. Text displayed on screen cannot be edited and serves only as a source of information on camera model, firmware and hardware version, as well as protocol for transmitting telemetry data.

FIRMWARE VER. - embedded firmware version.

COLOR SYSTEM - PAL or NTSC version

PROTOCOL - selected control protocol

ADDRESS - selected camera address

BAUD RATE - transmission speed

5.2. DISPLAY SETUP - OSD menu settings

DISPLAY SETUP	
CAMERA ID	: ON
PTZ INFORMATION	: AUTO
ACTION TITLE	: AUTO
PRESET LABEL	: AUTO
ALARM I/O	: AUTO
LANGUAGE	: ENG
<SET NORTH DIRECTION>	
<PRIVACY ZONE>	
BACK	
EXIT	

CAMERA OSD MENU

CAMERA ID - enables/disables camera address displaying

PTZ INFORMATION - enables/disables displaying camera coordinates.

ACTION TITLE - displays information about current PTZ command

PRESET LABEL - displays preset's title (if assigned) when it's called.

ALARM I/O - displays information on alarm input/output status

Setting AUTO implies that the camera displays information for a certain period of time, after detecting a change in it's status.

LANGUAGE - allows to select one of the following OSD languages: English, Polish, French, Italian, Romanian

<SET NORTH DIRECTION> - allows either to set or adjust camera's „North”. After entering the function please point the camera in northern direction and confirm position by pressing IRIS CLOSE or FOCUS NEAR .

<PRIVACY ZONE> - allows to manage privacy zones

Privacy zones allow to hide desired scenes from unwanted attention by obscuring them with a gray, opaque rectangle.

<u>PRIVACY ZONE</u>	
MASK NO.	↓
DISPLAY	ON
CLEAR MASK	CANCEL
<EDIT MASK>	
BACK	
EXIT	

MASK NO. - sets zone number

DISPLAY - enables or disables privacy zone displaying

CLEAR MASK - removes privacy zone

<EDIT MASK> - programs and adjusts a privacy zone

In order to program a privacy zone please enter the menu that appears and perform actions as described below:

- select zone number ranging from 1 to 8 using joystick
- select **<EDIT MASK>** and press IRIS CLOSE or FOCUS NEAR
- if a zone is set for the first time please point the camera towards a scene to be hidden and confirm selection by pressing IRIS CLOSE or FOCUS NEAR
- a gray zone is displayed, which may be later adjusted using joystick ,
- consecutive pressing of IRIS CLOSE or FOCUS NEAR confirms changes

CAMERA OSD MENU

5.3 CLOCK - allows to adjust camera's internal clock settings

DISPLAY DATE - enables/disables displaying date superimposed on video picture

DISPLAY TIME - enables/disables displaying time superimposed on video picture

CLOCK SETTINGS - allows to set the date/time manually

5.4. DOME CAMERA SETUP - camera dome settings

DOME CAMERA SETUP

<CAMERA SETUP>

<MOTION SETUP>

<PRESET SETUP>

<SCAN SETUP>

<PATTERN SETUP>

<TOUR SETUP>

<SCHEDULE>

BACK

EXIT

5.4.1. CAMERA SETUP - contains camera settings

CAMERA SETUP

FOCUS MODE : AUTO

DIGITAL ZOOM : OFF

IMAGE FLIP : OFF

SHARPNESS : 16

STABILIZATION : OFF

<WHITE BALANCE SETUP>

<AUTO EXPOSURE SETUP>

BACK

EXIT

FOCUS MODE - selects focus adjustment mode (FOCUS);

AUTO: auto focus settings;

MANUAL: camera operates in manual mode both during scene change and when pointing at a scene FOCUS FAR / FOCUS NEAR on the keyboard adjust the focus;

SEMIAUTO: camera operates in manual mode during presets and in auto focus mode for other cases.

DIGITAL ZOOM - enables or disables digital zoom (x12)

Please note that setting higher digital zoom values degrades the picture which becomes „blocky”. This is an immanent feature of the digital zoom function;

SHARPNESS - Adjust sharpness of the contours, ranging 0~15. Please note that high sharpness level may degrade the image quality;

IMAGE FLIP: function can be enabled (ON) or disabled (OFF). When enabled, it flips the picture

CAMERA OSD MENU

STABILIZATION - Enables/disables the digital image stabilization function. This function eliminates all minor camera oscillations caused by strong winds or other similar factors;

Note: Enabling the function narrows camera's field of view.

a). WHITE BALANCE SETUP - Allows to select white balance mode. AUTO (auto white balance in 1800 K~10500 K temperature range) is recommended for most applications, while MANUAL allows to adjust white balance using RED ADJUST (0 ~ 255 range) and BLUE ADJUST (0 ~ 255 range);

b). AUTO EXPOSURE SETUP

AE SETUP - GLOBAL

BACKLIGHT	: OFF
DAY/NIGHT	: AUTO
BRIGHTNESS	: 50
IRIS	: AUTO
SHUTTER	: ESC
AGC	: MIDDLE
SSNR	: MIDDLE
SENS-UP	: OFF

BACK
EXIT

BACKLIGHT - enables/disables various light compensation modes. Available modes are listed below:

OFF - Backlight compensation disabled.

HLC - High light compensation function. It allows to enhance visibility of the objects located near the strong, point light source. If a strong, point light source appears on the screen, function will mask it allowing for effective observation of the scene itself (function is best used to, for example, observe licence-plates of the cars during night). Level of the function as well as color of the mask are adjustable.

Note: HLC starts its operation when lighting level is sufficiently low and a strong, point light source appears on the screen.

BLC - Enables/disables backlight compensation mode that allows to enhance object (silhouettes) located in the foreground with strongly illuminated background.

CAMERA OSD MENU

DAY/NIGHT - switches between day/night operation modes. Available options are: AUTO (operating mode is switched depending on the external illumination level) or COLOR/BW operation modes, set manually.

BRIGHTNESS - adjusts picture brightness in 0 ~ 100 range

IRIS - sets iris either to manual or auto operation mode.

SHUTTER - selects shutter mode:

ESC - Automatically adjusts shutter to illumination conditions.

A.FLICKER - Enables/disables flicker reducing function, suggested for locations with strobe lightning (e.g. fluorescent lamps), equivalent to 1/120s shutter.

<MANUAL> - Manual shutter settings. Entering this mode allows to set shutter speed in 1/120000s ~ 256 x 1/50s range.

AGC - Auto gain control function which may be set either to LOW, MIDDLE or HIGH. The higher level, the bigger it's sensitivity to changes in illumination. Setting manual gain value is also possible. Please keep in mind, that increasing gain brightens the picture but increases noise as well.

SSNR - Noise reduction function. May be set either to LOW, MIDDLE or HIGH.

Note: Active DNR function may slightly degrade the picture.

SENS-UP - Enables/disables slow shutter mode. Function automatically elongates exposure time in low-illumination conditions which enhances the image. Please remember that when elongating exposure, noise level goes up and so does the brightness of the picture. This mode allows to set multiplier for the basic opening time (1/50s) in x2 ~ x256 range.

eng

CAMERA OSD MENU

5.4.2. MOTION SETUP

MOTION SETUP	
PROGRAM. LOCK	: ON
PWR UP ACTION	: ON
AUTO FLIP	: ON
PAN MAX SPEED	: 360/SEC
PAN DIRECTION	: NORMAL
FRZ IN PRESET	: ON
<PARKING ACTION SETUP>	
<ALARM INPUT SETUP>	
BACK	
EXIT	

PROGRAMING LOCK - function allows to disable direct programming or preset removal and surveillance functions.

PWR UP ACTION - in case of camera restart (e.g. after power loss) camera resumes with most recent surveillance function.

AUTO FLIP - function that automatically flips the picture 180°, so it isn't displayed „upside down”.

PAN MAX SPEED - adjusts camera's maximum pan speed in 1 ~ 360/sec range.

PAN DIRECTION - allows to switch camera's pan direction

FRZ IN PRESET - function freezes the picture while switching between presets

a). PARKING ACTION SETUP - allows to enable a function (preset, pattern, auto-scan or tour) after a pre-defined time of user's inactivity.

PARK ENABLE - enables or disables the function.

WAIT TIME - sets idle time, ranging from 1 second to 3 hours.

PARK ACTION - selects function to be executed after *WAIT TIME* value is exceeded.

b). ALARM INPUT SETUP - Impulse appearing on the camera's alarm input activates programmed function. Alarm may be associated with any preset, pattern, auto-scan or tour.

ALARM NO: - selects alarm input

TYPE - sets input mode either to normal open or normal closed.

ACTION - allows to set action on alarm.

HOLD TIME - sets the alarm action duration. Duration may equal the alarm input activation time, or other defined period of time after input triggering.

POST ACTION - sets the post-alarm action.

eng

CAMERA OSD MENU

5.4.3. PRESET SETUP - programmable presets. Programmed presets may be called directly from the keyboard, used in pattern function or used as a default action for home/alarm functions.

PRESET SETUP	
PRESET NO	: 1
CLR PRESET	: CANCEL
<EDIT SCENE>	
<EDIT LABEL>	
RELAY OUT	: OFF
CAM ADJUST	: GLOBAL
BACK	
EXIT	

PRESET NO - selects preset to be programmed

CLR PRESET - deletes a desired preset

<EDIT SCENE> - opening this submenu allows to pick a desired scene. IRIS CLOSE or FOCUS NEAR confirms the choice.

<EDIT LABEL> allows to assign description to a preset

RELAY OUT - associates preset with alarm input activation

CAM ADJUST - adjusts white balance and exposure settings. GLOBAL settings indicate that standard camera settings are applied. Switching to LOCAL allows to adjust the white balance and exposure individually for each preset.

5.4.4. SCAN SETUP - allows to set up scan zones, i.e. two points that the camera shuttles between using the shortest possible track - namely the „1ST POS.” and „2ND POS.” which are presets.

SCAN SETUP	
SCAN NO	: 1
1ST POS.	: 3
2ND POS.	: 2
SCAN SPEED	: 30/SEC.
CLEAR SCAN	: CANCEL
RUN SCAN	
BACK	
EXIT	

SCAN NO - selects scan number

1ST POS. - sets the starting preset for a scan

2ND POS. - sets the ending preset for a scan

SCAN SPEED - sets the speed that the camera will move with between points

CLEAR SCAN - allows to erase settings for a scan

RUN SCAN - launches auto-scan

CAMERA OSD MENU

5.4.5. PATTERN SETUP - Pattern is a sequence of an existing functions (pan, turn, zoom, etc.), that may be called via keyboard or used in tours. Maximum number of steps for a single pattern is 1200.

```

PATTERN SETUP
PATTERN NO          : 1
CLR PATTERN         : CANCEL
RUN PATTERN
<EDIT PATTERN>

BACK
EXIT
  
```

PATTERN NO - selects pattern for configuration

CLR PATTERN - clears a selected pattern

RUN PATTERN - starts a pattern

<EDIT PATTERN> - starts pattern programming. Opening the function displays the following sub-menu:

```

EDIT PATTERN 1

MOVE TO START POSITION
NEAR START / FAR: CANCEL
  
```

To program a pattern please follow the instructions below:

- Select pattern's starting point.
- Pressing IRIS CLOSE or FOCUS NEAR starts programming.
- Move camera via joystick along a desired path - camera stores automatically all movements (PTZ) made during programming
- Subsequent IRIS CLOSE or FOCUS NEAR pressing saves pattern and returns to a higher level menu.
- Pressing IRIS CLOSE or FOCUS FAR discards changes and exits pattern programming.

CAMERA OSD MENU

5.4.6. TOUR SETUP - Allows to set up Tours, i.e. lists of consecutively executed surveillance functions (presets, patterns, and scans, up to 20 functions per tour). During tour, camera stops at presets for a defined period of time, while scans/patterns are repeated certain amount of times.

TOUR SETUP

TOUR NO. : 1
 CLEAR TOUR : CANCEL
 RUN TOUR
 <EDIT TOUR>

BACK
 EXIT

TOUR NO. - selects tour for configuration

CLEAR TOUR - clears a pre-programmed tour

RUN TOUR - selecting starts test run of a tour

EDIT TOUR - starts patrol programming. Selecting it displays the following window:

EDIT GROUP 1

NO ACTION	##	DWELL	OPT
1 PRESET	4	00:09	10
2 PRESET	4	00:14	30
3 PRESET	6	00:03	10
4 SCAN.	1	00:10	2
5 PATTERN	1	00:15	1

BACK
 CANCEL

- Pressing IRIS CLOSE and FOCUS NEAR starts programming.
- Using joystick, select desired action for the first position (marked with frame), its number, dwell time after action and speed of switching (for presets) or number of repeats (for patterns and auto-scans)
- Next, please go to sub-sequent positions and configure them as described above.
- Pressing IRIS OPEN or FOCUS FAR returns to previous menu.
- In order to save changes please select BACK and confirm with IRIS CLOSE or FOCUS NEAR.

CAMERA OSD MENU

5.4.7. SCHEDULE This function allows to create a schedule controlling surveillance functions such as presets, patterns and scans. With schedule on, camera starts a desired function either once (or cyclically, with defined periods) at a defined time, lasting continuously or for a given period. Upon completing schedule, camera returns to home position, or other, also set in the menu.

SCHEDULE

SCHEDULE NO.	: 1
ACTION	: TOUR1
HOLD TIME	: 00:05:00
POST ACTION	: PREV.ACT
CYCLE	:GODZ.
TIME	
01/JAN/2011	SAT
18:50:00	[hh:mm:ss]

WSTECZ
WYJSCIE

SCHEDULE NO. - allows to select schedule for further setup

ACTION - allows to set a desired function to be executed during schedule (preset, pattern, tour, scan)

DURATION - sets schedule duration (loop, 1s-3h)

POST ACTION - sets action to be executed after completion of schedule

CYCLE - sets the interval between two consecutive schedule runs (in 1h - 1 month range)

TIME - allows to set time and date for schedule execution

eng

CAMERA OSD MENU

5.5. PASSWORD SETUP– allows to turn on password protection for the camera MENU.

PASSWORD SETUP

CHECK PASSWORD	OFF
<EDIT PASSWORD>	

BACK
EXIT

CHECK PASSWORD - allows to check password before entering the menu

<CHANGE PASSWORD> - this menu opens the edit window where you can enter a new password .

5.6 SYSTEM INITIALIZE– allows to restore factory defaults or re-initialize the camera.

SYSTEM INITIALIZE

CLEAR ALL DATA	NO
• CLR DISPLAY SET	NO
• CLR CAMERA SET	NO
• CLR MOTION SET	NO
• CLR EDIT DATA	NO
REBOOT CAMERA	NO
REBOOT SYSTEM	NO

BACK
EXIT

CLEAR ALL DATA - running this function restores all values to factory defaults.

CLR DISPLAY SET - running this function restores display settings to factory defaults.

CLR CAMERA SET - running this function restores camera module settings to factory defaults.

CLR MOTION SET - this function restores PTZ settings to factory defaults.

CLR EDIT DATA - clears all presets, patterns, tours and autoscans

REBOOT CAMERA - function allows to perform a hardware reset of the integrated circuit responsible for image processing.

REBOOT SYSTEM - allows to perform a hardware camera reset and its subsequent initialization and calibration (identical to power loss scheme).

NOTES

<http://www.e-camere.ro/camere-supraveghere/Novus/NVC-DN6227SD-II>

eng